

INSTRUCTION MANUAL

W296CS

107.1 MHz

Lakeland, FL

Antenna Model: PSIFML-1C-DA

Uncrating

When uncrating the antenna system, open each crate carefully so that the crates may be used to return any merchandise that may have been damaged in shipping. Separate all parts and confirm that all items on the packing list have been received. If any parts are missing, notify PSI or its agent prior to assembling the antenna. If any parts are damaged through shipment or are missing, **promptly** notify the shipping carrier and PSI.

General Notes:

1. Review antenna elevation and plan the installation. The antenna brackets have been designed for tower leg mount only. Be aware of possible mounting conflicts such as other antennas, guy wires, tower leg flanges, conduits etc. and plan accordingly.
2. All bays are to be aligned to the same azimuth angle.
3. Use only the supplied hardware.
4. Exercise care when assembling the 7-16 DIN connector.
5. Check a bracket on the tower leg for proper fit.
6. Install one bay at a time.
7. Keep all transmission lines free from dirt and moisture. All Teflon insulators must be clean and dry.
8. The antenna does not require pressurization.
9. The antenna has been tuned at the factory and should not require field adjustment.
10. The antenna system should be tested before the erector leaves the premises to insure that the complete antenna system is functioning properly.

Installation Procedure

Step One

Attach the horizontal parasitic element, 1451-003 to the antenna boom using the supplied #28 hose clamps as shown in drawings 1451-001 and -002. Next attach the antenna bay to the center of the support mast using the 1/2-13 x 6" bolts and back plate. Attach mast mounting bracket 1451-004 approximately 12" from each end of the support mast as shown in 1451-001 and -002.

Step Two

Hoist the assembled antenna bay and secure the bracket to the northeast tower leg at the 361 ft. elevation using the 3/8-16 x 2-15/16" U-bolts. Position the antenna 84° as shown in drawing 1451-002.

Step Three

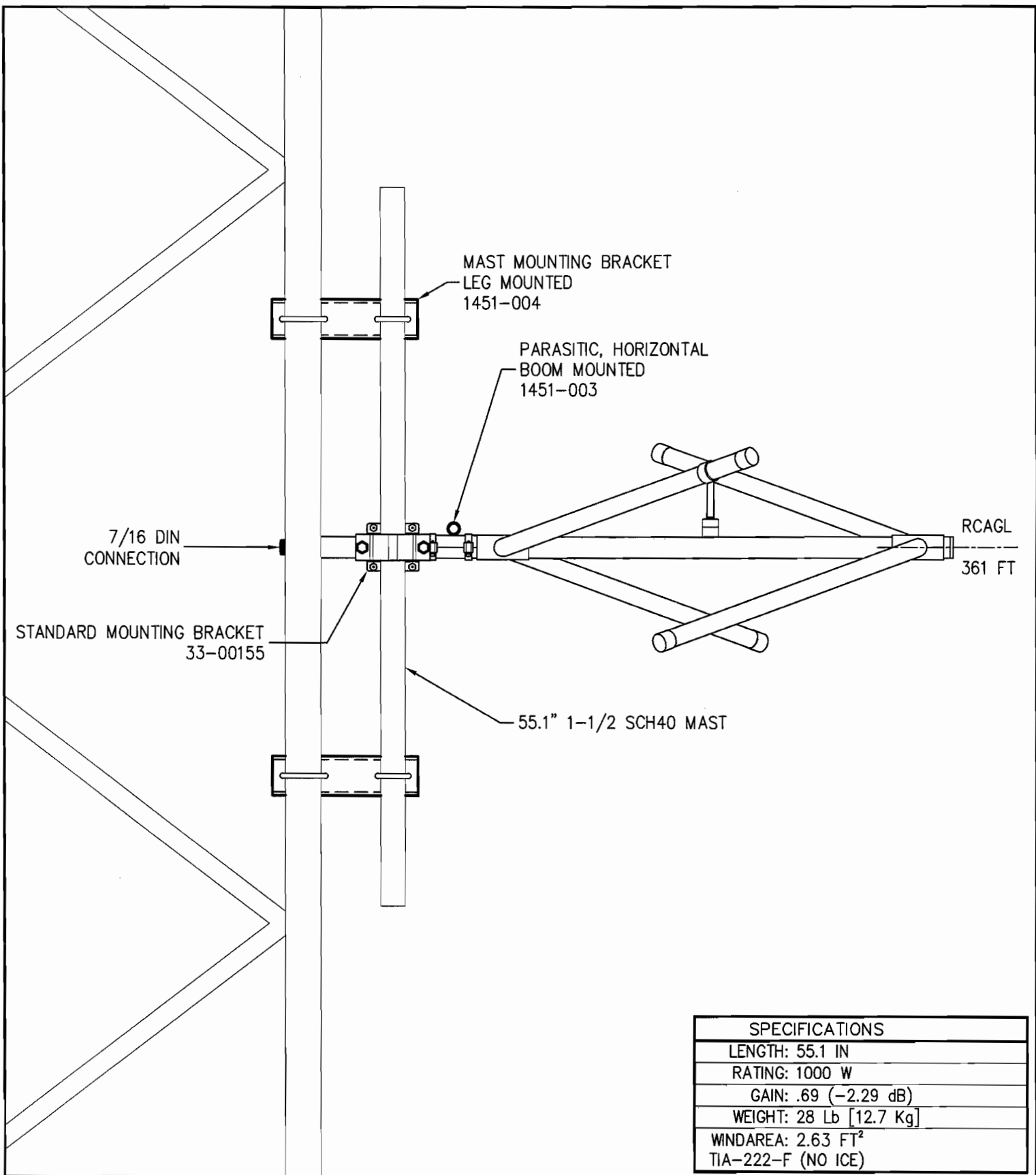
Check all bolted connections for tightness. Connect the main transmission line (not supplied) to the antenna input located at the end of the element boom. The antenna has a 7-16 DIN female input connector.

Drawing Index

<u>Drawing</u>	<u>Title</u>
1451-001	Antenna Elevation and Specifications
1451-002	Plan View and Orientation
1451-003	Parasitic, Horizontal, Boom Mounted
1451-004	Mast Mounting Bracket, Leg Mounted
33-00155	Antenna Saddle Bracket

Antenna Specifications

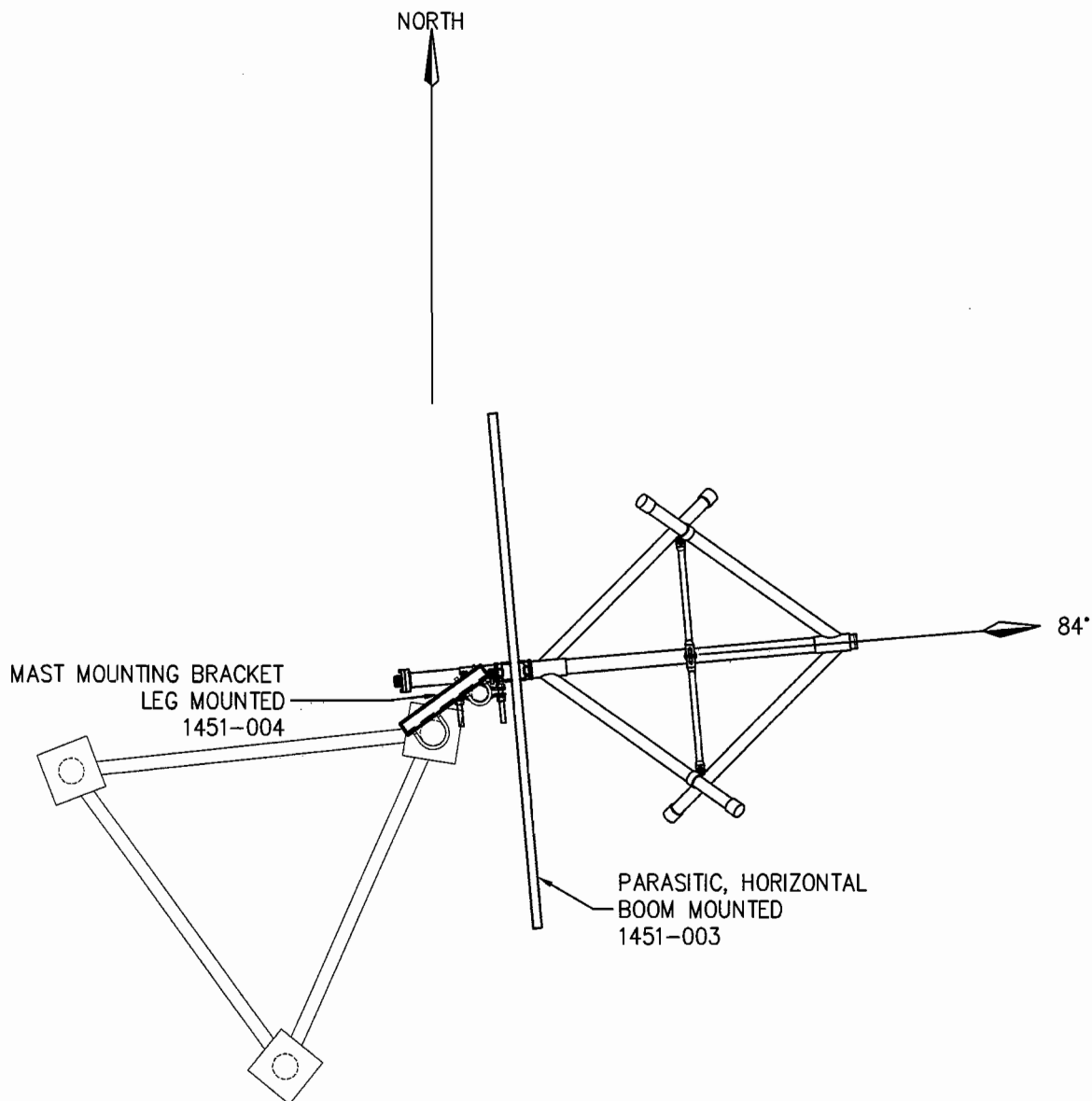
Model	PSIFML-1C-DA
Description	1-bay low power directional FM broadcast antenna
Frequency	107.1 MHz
Polarization	Circular
Gain	.69 (-2.29 dB)
Input	7-16 DIN female
Rating	1000 W
Length	4.59 ft.
Weight	28 lbs.
Wind Area	2.63 Sq. Ft.



SPECIFICATIONS	
LENGTH:	55.1 IN
RATING:	1000 W
GAIN:	.69 (-2.29 dB)
WEIGHT:	28 Lb [12.7 Kg]
WIND AREA:	2.63 FT ²
TIA-222-F (NO ICE)	

REV.	MADE BY CHECKED BY	DATE	CHANGE
<p>This drawing is loaned subject to the express understanding and agreement that the drawing and information therein contained are, and shall remain the property of PSI, and will not be otherwise utilized or disposed of, directly or indirectly, and will not be used in whole or in part or assist in making or finish any information for the making of drawings, prints or other reproductions hereof, or for the design or making of any item, parts, object, apparatus or parts thereof, except upon the written permissions of PSI first obtained. The acceptance of this drawing will be construed as an acceptance of the foregoing agreement.</p>			
			SIZE A

PROPAGATION SYSTEMS, INC.			
Ebensburg, Pennsylvania, USA 814-472-5540			
ANTENNA ELEVATIONS AND SPECIFICATIONS			
MODEL:	PSIFML-1C-DA	DRAWN BY:	B.K.SCHILLING
CHANNEL/ FREQUENCY:	107.1 MHz	APPROVED BY:	
SCALE:	1:10	DRAWING NO.:	1451-001
			DATE: 6/3/15
			REV.



REV.	MADE BY CHECKED BY	DATE	CHANGE	SIZE
				A

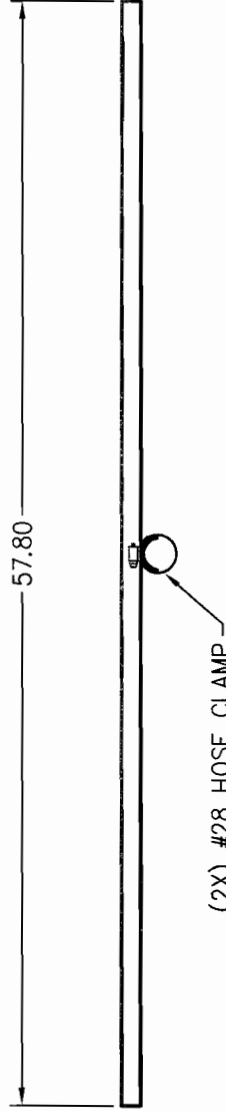
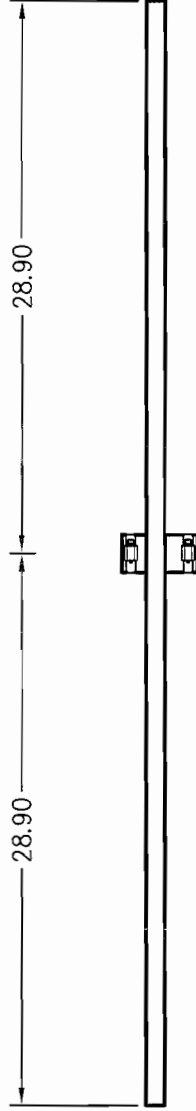
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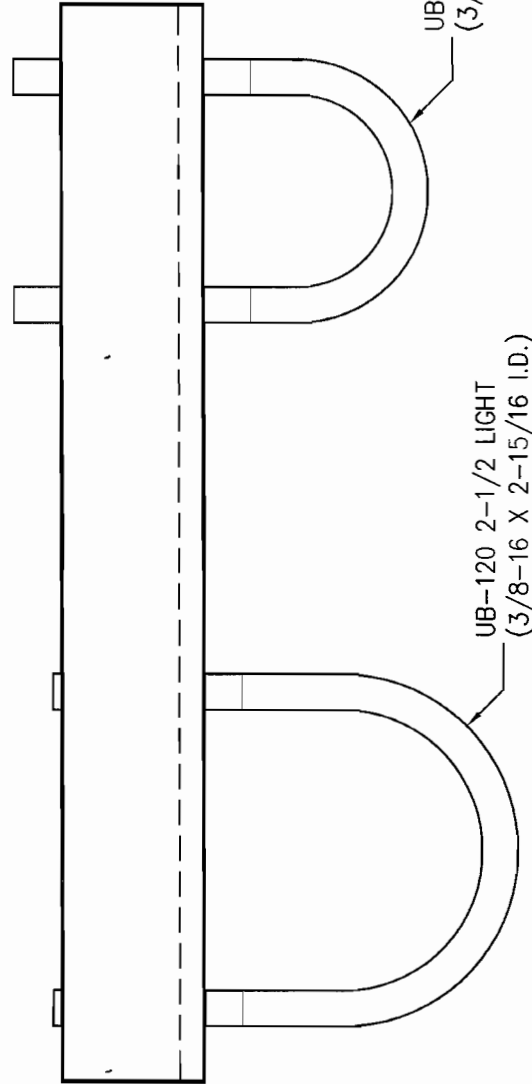
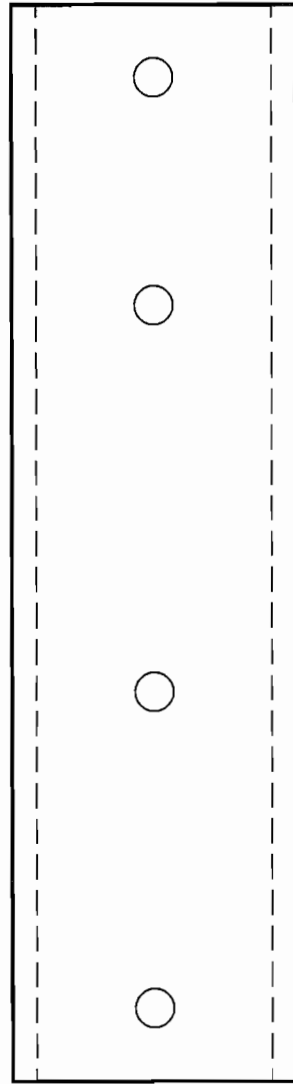
PLAN VIEW AND ORIENTATION

MODEL: PSIFML-1C-DA	DRAWN BY: B.K.SCHILLING	DATE: 6/3/15
CHANNEL/ FREQUENCY: 107.1 MHz	APPROVED BY:	DATE:
SCALE: 1:20	DRAWING NO.: 1451-002	REV.



- NOTES:
1. (1) REQUIRED
 2. WEIGHT: 4.5 LB
 3. WINDAREA: .4 FT²
 4. HOT DIP GALVANIZED

PROPAGATION SYSTEMS, INC. Ebensburg, Pennsylvania USA PARASITIC, HORIZONTAL, BOOM MOUNTED		MODEL: PSIFML-1C-DA CHANNEL: 7 FREQUENCY: 107.1 MHz SCALE: 1:10		DRAWN BY: B.K. SCHILLING APPROVED BY: DATE: 6/3/15 SHEET 1 REV.	
MATERIAL:		TOLERANCES UNLESS OTHERWISE NOTED FRACTIONS X/XX ± 1/16" DECIMALS XX ± .01" ANGLES XXX ± 3°		SIZE A	
REV.		MADE BY CHECKED BY DATE		CHANGE	
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PROPAGATION SYSTEMS, INC.

Ebensburg, Pennsylvania USA

MAST MOUNTING BRACKET, LEG MOUNTED

MODEL: PSIFML-1C-DA

DATE: 6/3/15

CHANNEL/
FREQUENCY: 107.1 MHZ

APPROVED BY: _____ DATE: _____

SCALE:	PART NO.:	DRAWING NO.:
		1451-004

LEADS

REV.

TOLERANCES
UNLESS OTHERWISE NOTED

FRACTIONS X/X	$\pm 1/16"$
DECIMALS XX	$\pm .01"$
DECIMALS XXX	$\pm .005"$
ANGLES	$\pm 3'$

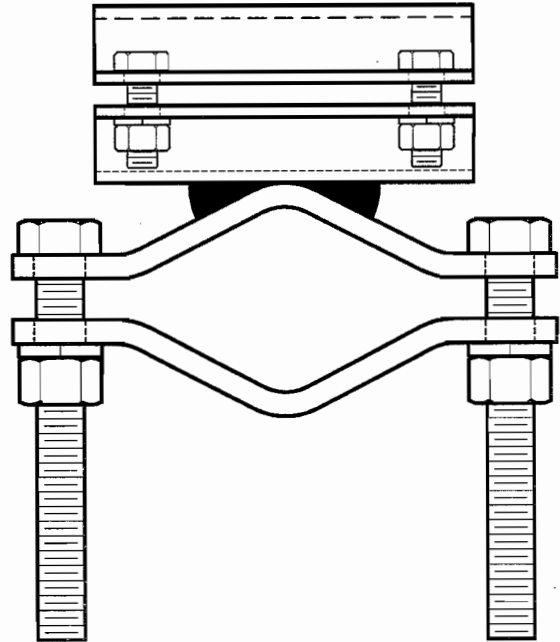
SIZE **A**

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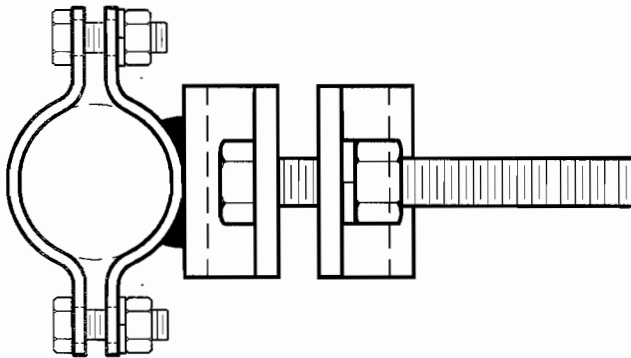
CHANGE

MADE BY	DATE
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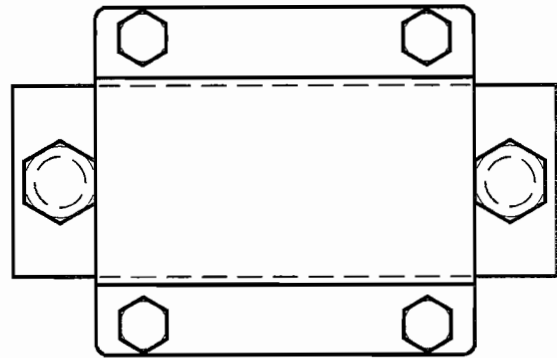
MADE BY



PLAN VIEW



SIDE VIEW



FRONT VIEW

NOTE:

1. FITS 1½" TO 4" DIAMETER ROUND MEMBERS
2. WEIGHT: 4.0 Lb
3. WINDAREA: .1 Sq. FT. (TIA-222-F)

REV.	MADE BY CHECKED BY	DATE	CHANGE

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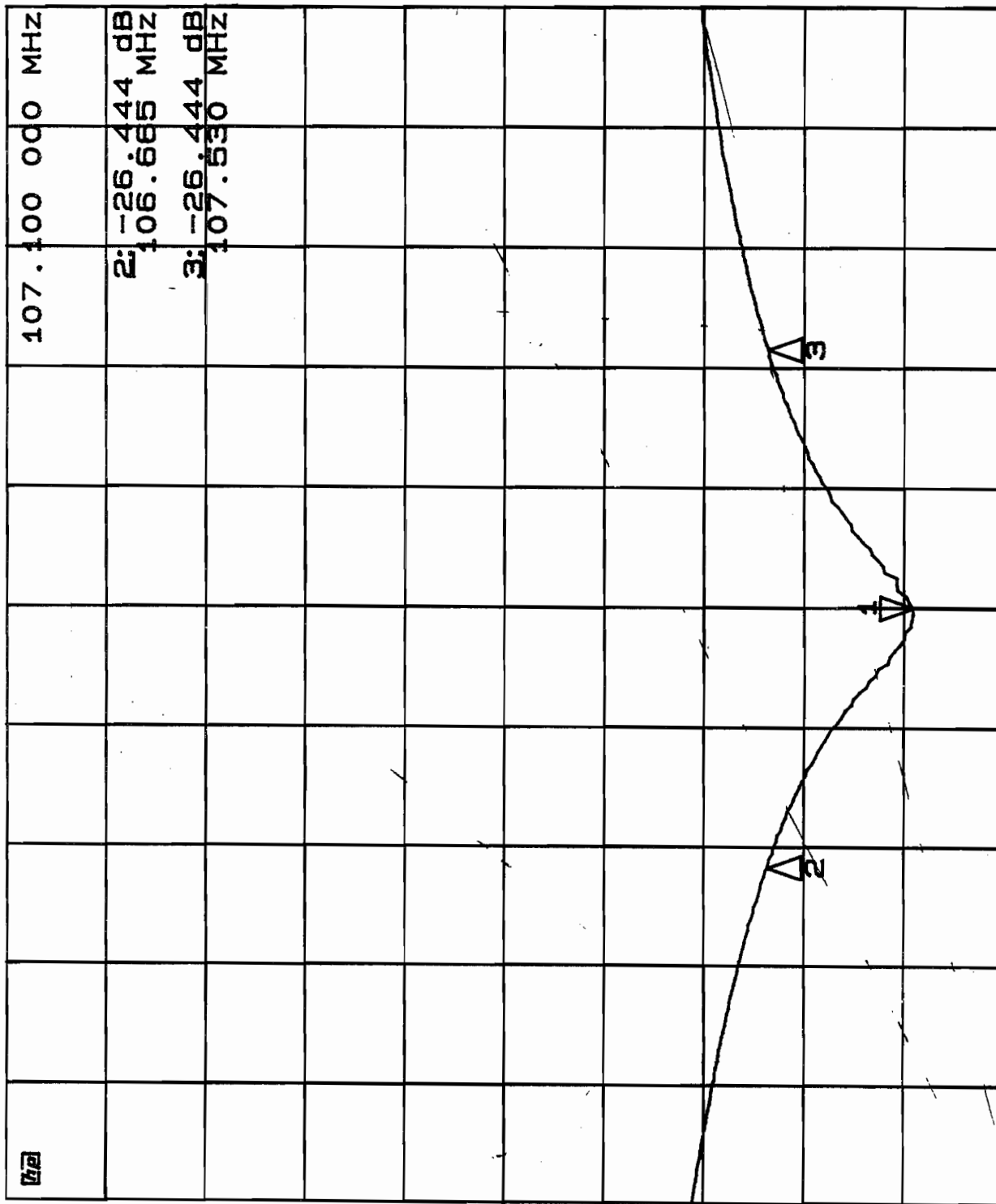
SADDLE BRACKET

MODEL: PSIFM	DRAWN BY: D.G. Kellar	DATE: 11/01/05
CHANNEL/FREQUENCY:	APPROVED BY:	DATE:
SCALE: 1:2	DRAWING NO.: 33-00155	REV.

CH1 MEM log MAG 10 dB/ REF 0 dB 1: -41.007 dB

PRM

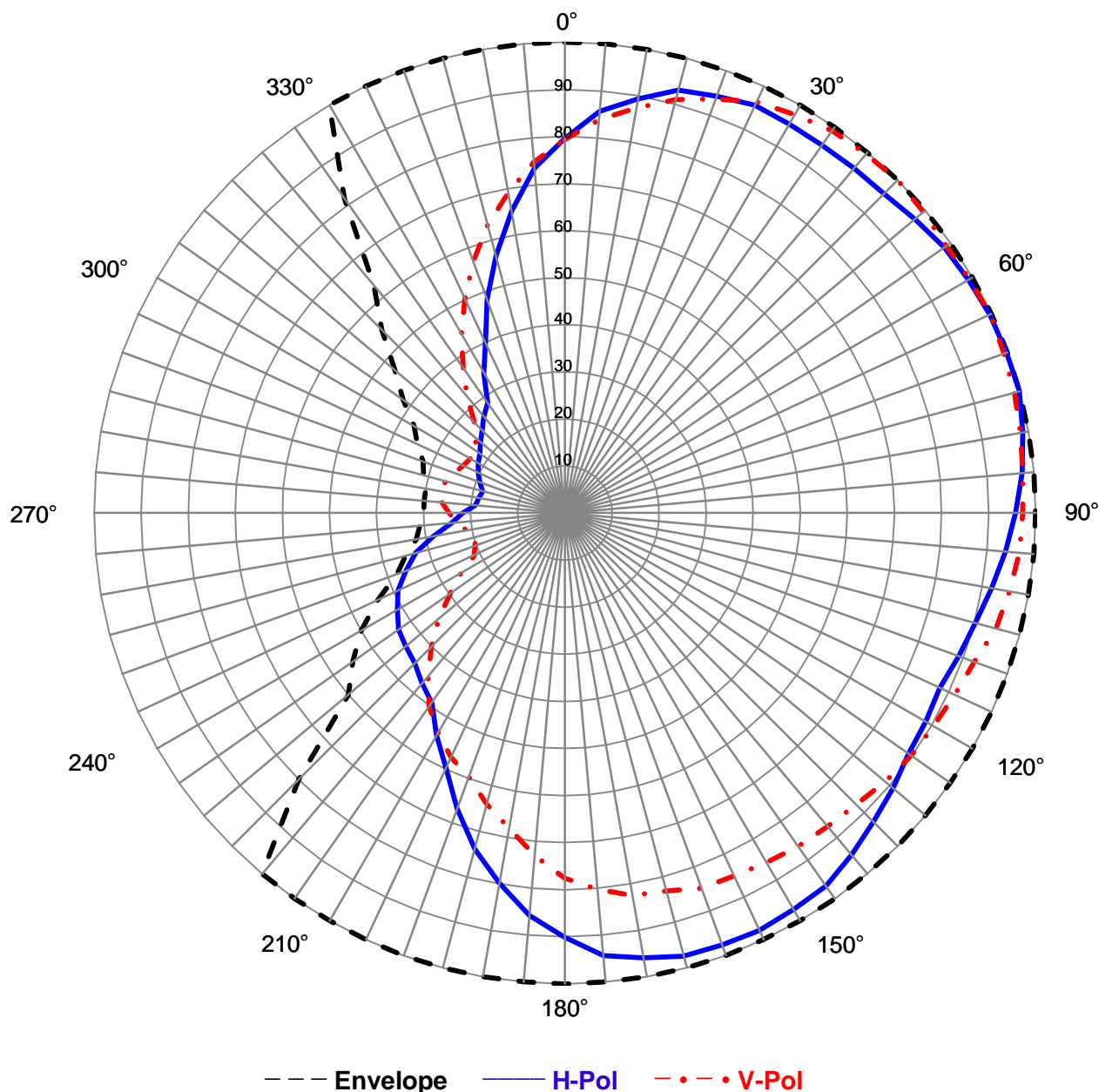
Cor



START 105.100 000 MHz STOP 108.100 000 MHz



Relative Field Azimuth Plane Pattern



Pattern Type:	Relative Field	Tower:	41" Face
Antenna Model:	PSIFML-1C-DA	Leg Orientation:	54°, 174°, 294°
Polarization:	Circular	Antenna:	84°
Gain:	.69 (-2.29 dB)	Reference:	W296CS
Frequency:	107.1 MHz	Date:	7/7/2015